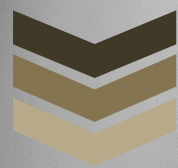


VidFspot

Horizontal Field of view



Video Follow Spot

VidFspot is windows based system for remote control of one moving light to be used as follow spot.

VidFspot - V1

Horizontal Field of View

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2/17/2015

Video Follow Spot – Video Camera Horizontal Field of View

System setup for measuring horizontal field of view is given figure 1.1.

When measuring video camera horizontal field of view, first connect the camera to computer and point the camera towards the wall. Horizontal field of view that we will measure is also showed in this figure.

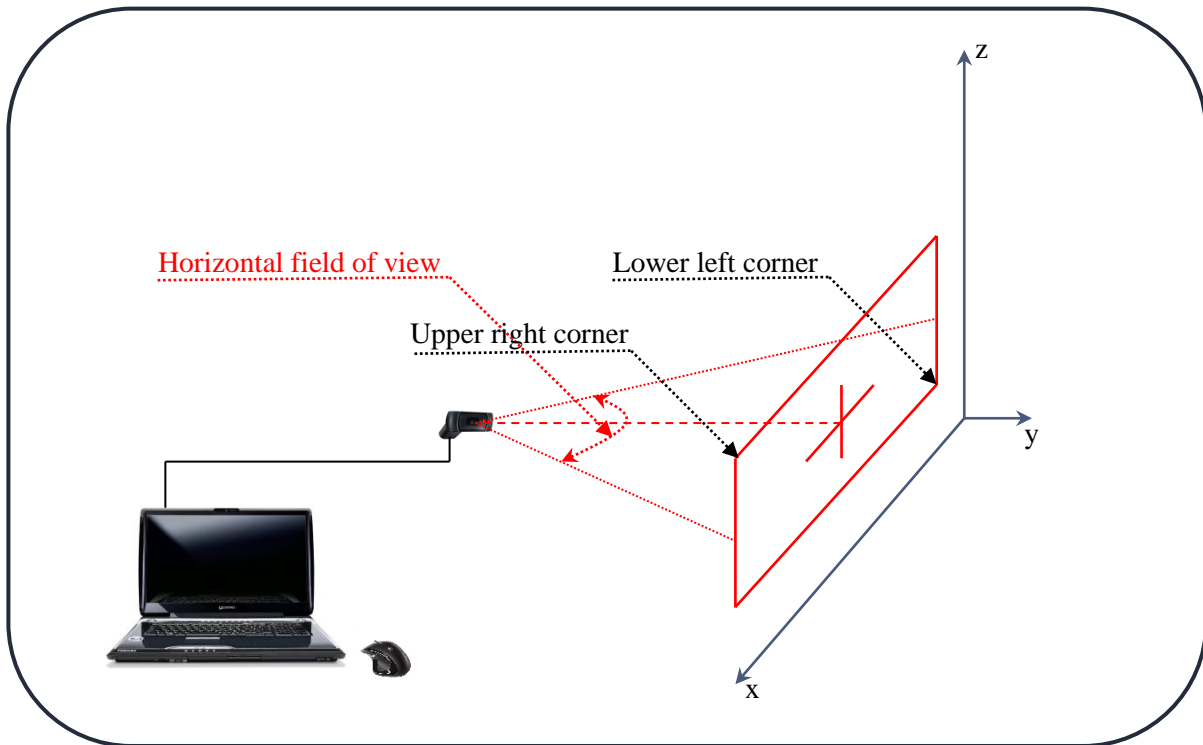


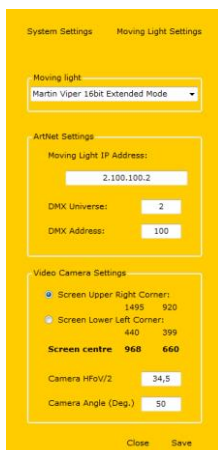
Figure 1.1 System description for measurement

Start the video player application and place the video player window in any position on desktop, see figure 1.2.

Set to camera to have widest field of view.

Start vidFspot software and select System Settings on a toolbar.

First thing that need to be done is to define the video frame. Video frame is a frame that actually displays the video. We will do that by marking the „Upper right corner“ and „Lower left corner“ of the video frame.



Select the „Screen Upper Right Corner“ check box and move a mouse pointer over upper right corner of the video frame. Now press the ctrl button. Program will display the coordinates of this point.

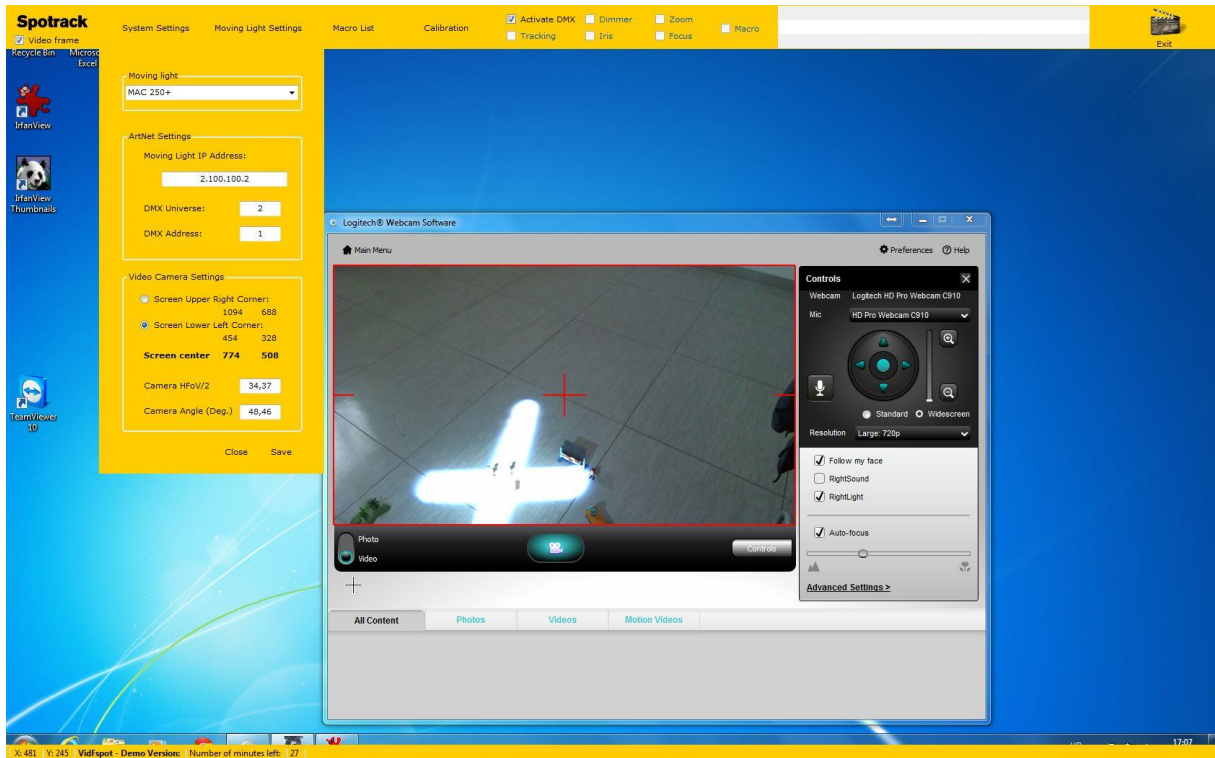
Now select „Screen Lower Left Corner“ check box and move a mouse pointer over lower left corner of the video frame. Now press the ctrl button. Program will display the coordinates of this point.

Program will also calculate screen center coordinates.

Video Follow Spot – Video Camera Horizontal Field of View

Press Save button and then, press v key. Coordinates of these points are saved and video frame is displayed.

It is mandatory that video frame (in red color) and video player borders must overlap.



Here is one example of well-marked video frame. Now turn off red video frame (uncheck Video frame check box).

Now use tree calibration grid sheets and tape them to the wall.

All grids must be on the same height from the ground, and camera also must have this height also.

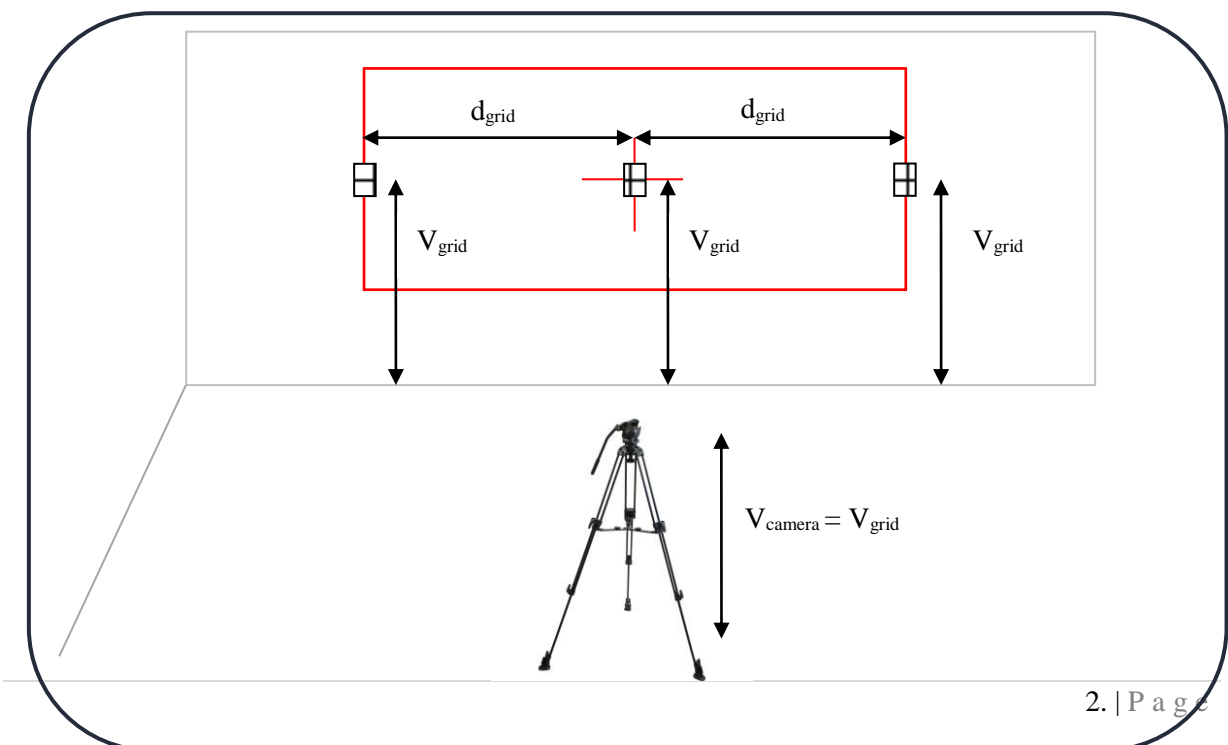
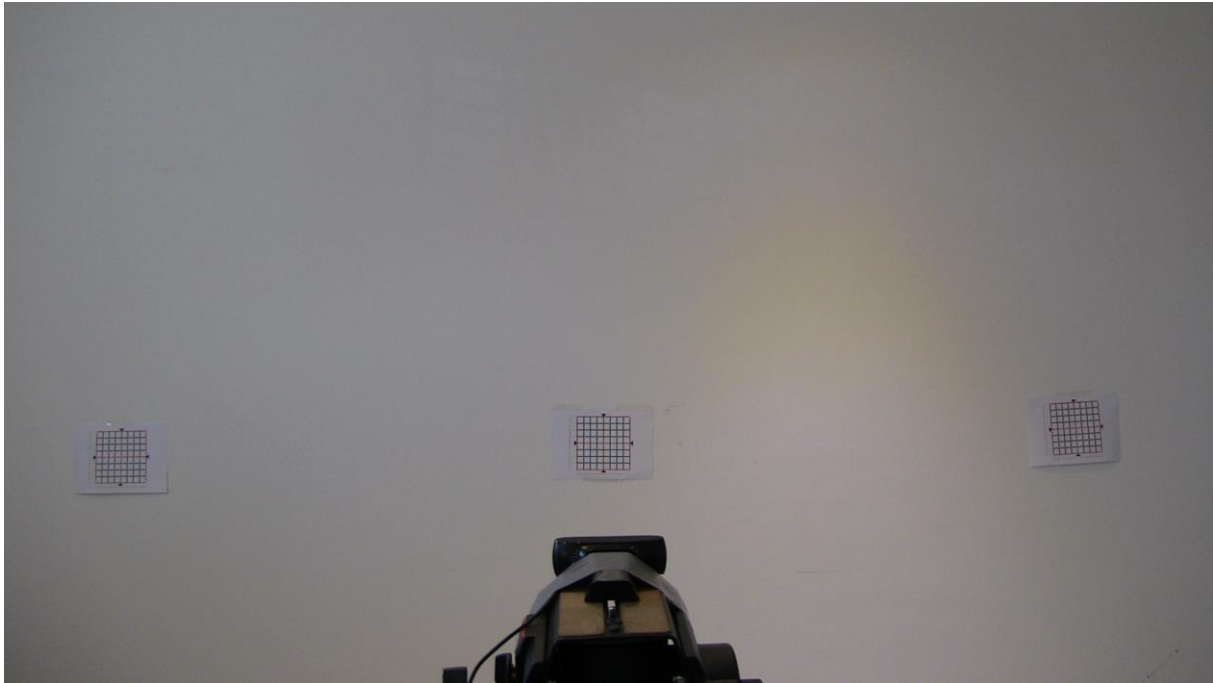


Figure 1.2 Camera alignment



Align the camera in position as showed on figure 1.2

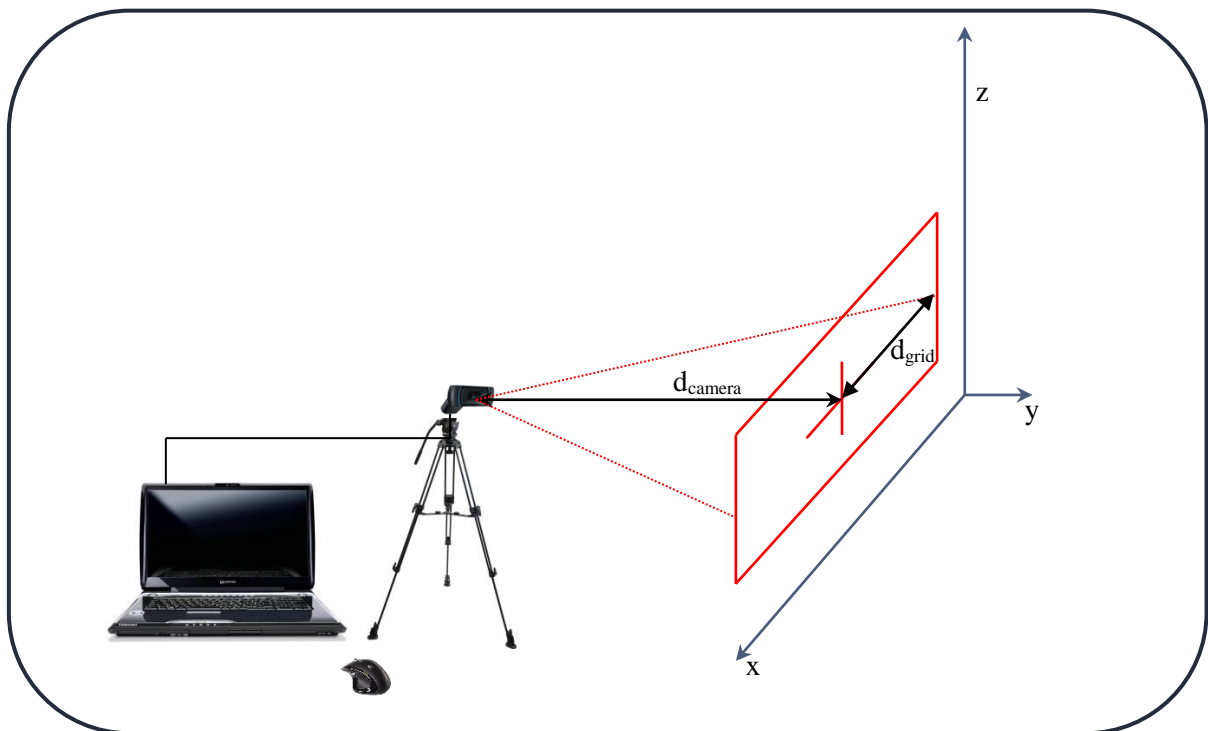


Figure 1.2 Camera alignment

Measure these two distances

Video Follow Spot – Video Camera Horizontal Field of View

d_{camera} distance from camera (ccd chip) to the wall.

d_{grid} distance between two video centre point and edge point.

Horizontal field of view is calculated as:

$$\text{HFoV} = 2 * \arctg\left(\frac{d_{\text{grid}}}{d_{\text{camera}}}\right)$$

Note!

Please make shore that camera is looking directly in the wall.



**VidFspotHorizontal Field
of View**

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